1 sourcing

data level

**static files
suppliers API
search logs
booking logs**

remap frequency

static / 24h - 72h

search level

**suppliers' API
availability
responses**

deferred / 15-30 mns

real-time / user's query

2 mapping

mapper

**room
code
+
content**

| API |
| VPN |
| license |

batch

hotel level

usage

logs / *analytic*

inventory / *update*

batch / *deferred*

on the fly / *fresh data*

3 matching

**mapped
inventory
cache**
*hotel-codes
room-codes*

**Hot markets
bestsellers**

weekly logs

my inventory

matching
*inventory
virtualization*

new ?

*pre-mapped
content*

exist ?

best avail. rate

**BOOKING
FLOW**

4 learning

with ML / without

**Fintech
dedicated layer**

**LLM & chatbot
hotel / rental / room
datasets upload**

prediction *personalization*

A.I. TOOLS

time to buy ?

rate optimization: matching - ranging - scoring

**BOOKING FLOW MAPPED
WITH A.I. TOOLS**

nextGen UX

- *advanced filtering, dyna map*
- *shortcuts: type, ada, family...*
- *group, range & scoring intels*
- *best offers automated push*
- *...*

smart search

- *hotel / vac. rental / room vertical*
- *fast search / selection. low L2B*
- *conversational chatbot / chatGpt*
- *VR - voice2book - new cel apps*
- *...*

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1 Static: Suppliers inventories remap every 24 to 72 hours. *(Not recommended for price optimization).*
Deferred: Send batches of rooms to be re-mapped every 15 to 30 minutes. *(inventory update in the background)*
Real-time: You send suppliers availability responses to the mapper on-the-fly *(<1 sec response time).*

Sources data consistency can be highly random. Each time you add a cache layer, you add delay and outdated data.
Use deferred & real-time to guarantee a constantly updated inventory *(recommended for bestsellers & hot destinations)*

2 Infinite power: The mapper acts as a FaaS & is infrastructure light. Optimized for low-cost on-the-fly high speed,
a $400/month server handles 120k mappings per seconde. With so much low cost mapping power in hands,
you don't need to count & can use it at will for static, deferred or even 100% of your searches mapped on-the-fly.
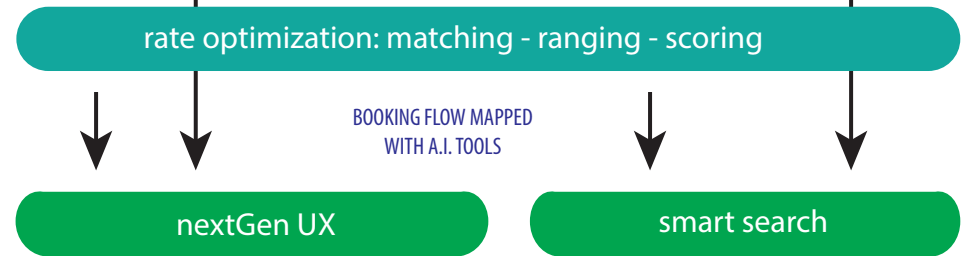
3 Mapped inventory: Having a mapped inventory allows high UX personalization & you can use it in hybrid mode.
Whereas, having the pre-mapped room-codes, when receiving the suppliers' availability responses, you reconcile
them and stream the corresponding room content from your cache. But there is a major caveat; Many suppliers
do not maintain static files fast enough & discrepancies between a static inventory & avail. response can by substantial.

Inventory virtualization: Knowing the mapper returns the complete separation & intel, it is as fast to get the
content from it than to query a database. As maintaining a global room level inventory can be a true pain, you can
go with a complete inventory virtualization approach (deferred or real-time), based on avalabilities responses only.
You keep your present flow with cheapest rate at hotel level show & at room level, you show the mapped response.

4 Fintech & LLM: Using the returned dataset allows for an easy fintech approach with/without FI machine learning.
The same detailed dataset is turnkey to upload to Large Language Models, chatGpt, chatbot.

Room-matching NLP A.I. is agnostic and maps hotel, vacation rental & room name, description the same way
for an unified mapping model. Your search engine or chatbot is smart at hotel, vacation rental and room levels.

Your comprehensive guide to master room level intelligence.

*nextGen UX, high personalization, granular RM, OTA insights, attribute level compsets, dynamic markup, price optimization & prediction,
inventory mount, elastic indexing, search engine, with/without ML fintech, ML datasets, LLM, openAI, ChatGpt, chatbot, voice2booking.*

ROOM MATCHING